

The National Immunisation Schedule

Update and Current issues

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National Immunisation Office



www.immunisation.ie

Objectives

- To outline immunisation schedules in Ireland
 - Primary childhood schedule
 - Vaccine uptake rates
 - School immunisation programme
 - Flu vaccination programme
- To highlight development of new vaccines



Dates vaccines introduced into the Irish immunisation schedule

1937 - 1999	
Vaccine	Date introduced
1. BCG	1937
2. DT	1930s
3. DTP	1952
4. Oral Polio Vaccine (OPV)	1957
5. Rubella	1971
6. Measles	1985
7. MMR	1988
8. MMR2	1992
9. Hib	1992

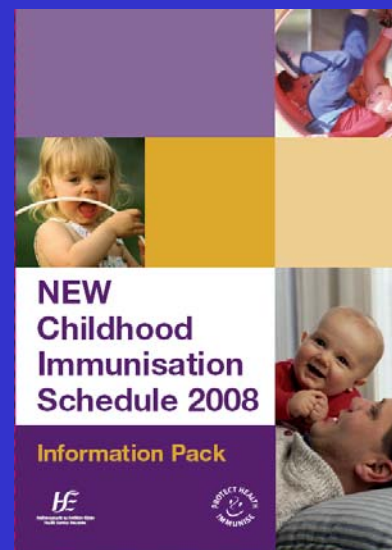
2000 - 2015	
Vaccine	Date introduced
1. Men C	2000
2. DTaP-Hib-IPV (5 in1)	2001
3. Inactivated Polio (IPV)	2001
4. Hib Booster	2006
5. Hepatitis B (as part of 6 in 1)	2008
6. PCV7	2008
7. HPV	2010
8. PCV13	2010
9. Tdap	2012
10. Men C (adolescent booster)	2014



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Primary Childhood Immunisation (PCI) Schedule

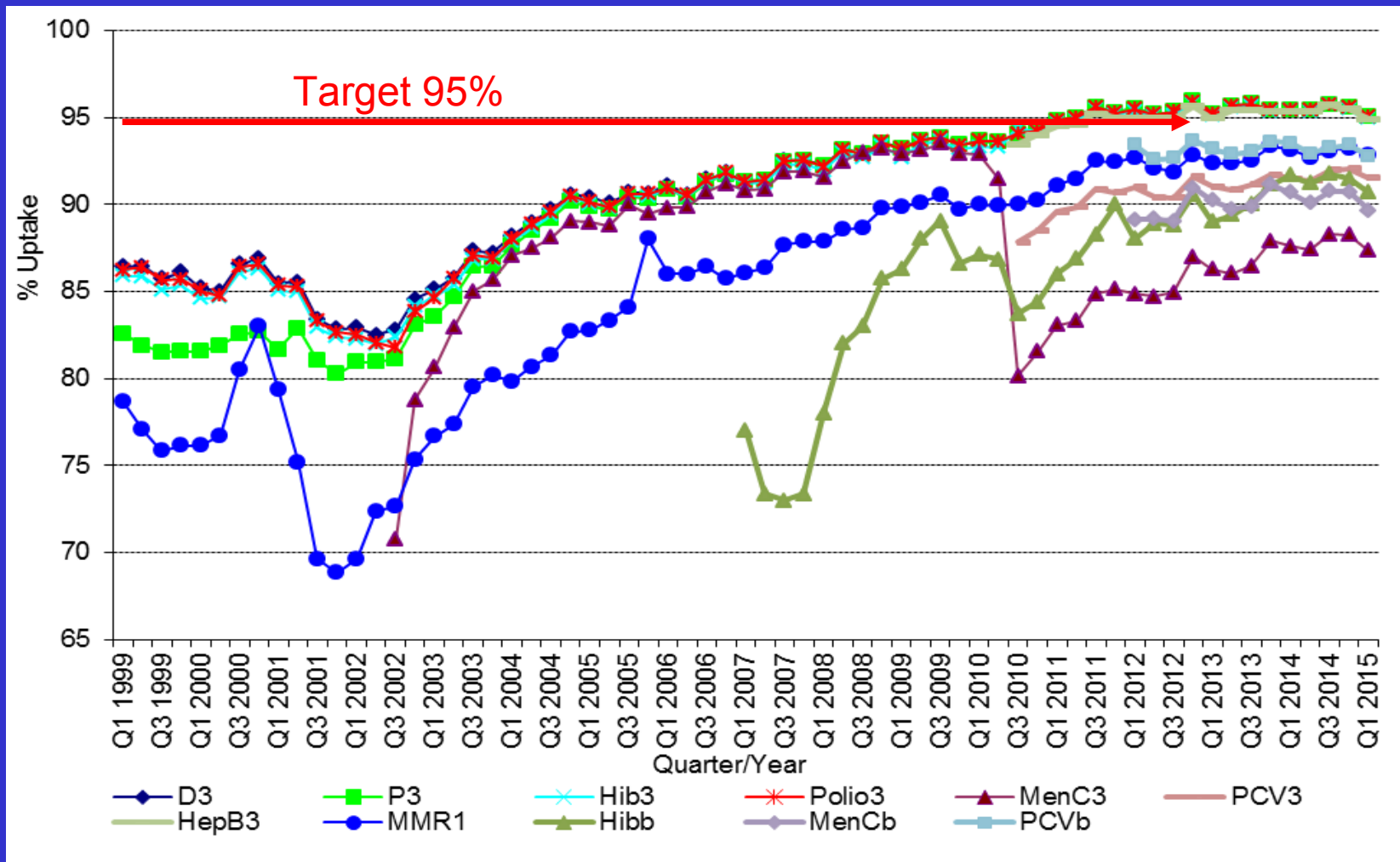
- Birth BCG
 - 2 months 6 in 1 + PCV*
 - 4 months 6 in 1 + Men C
 - 6 months 6 in 1 + PCV (+MenC*)
 - 12 months MMR + PCV
 - 13 months Men C + Hib
- * if born before July 1st 2015



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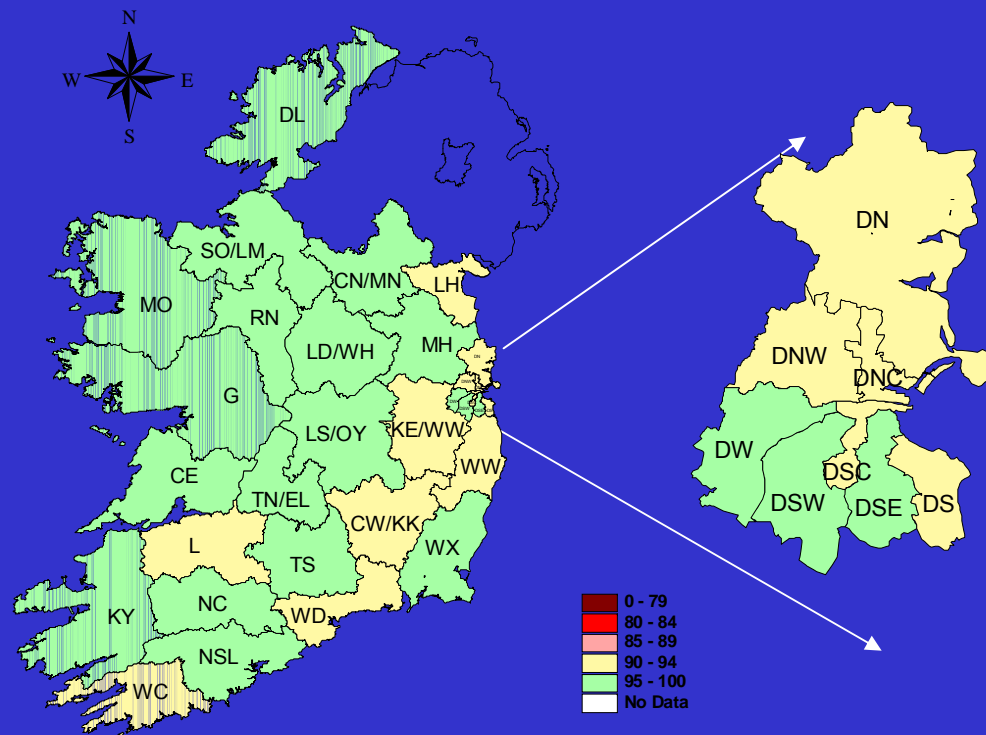


Vaccine uptake rate at 24 months 1999-2015

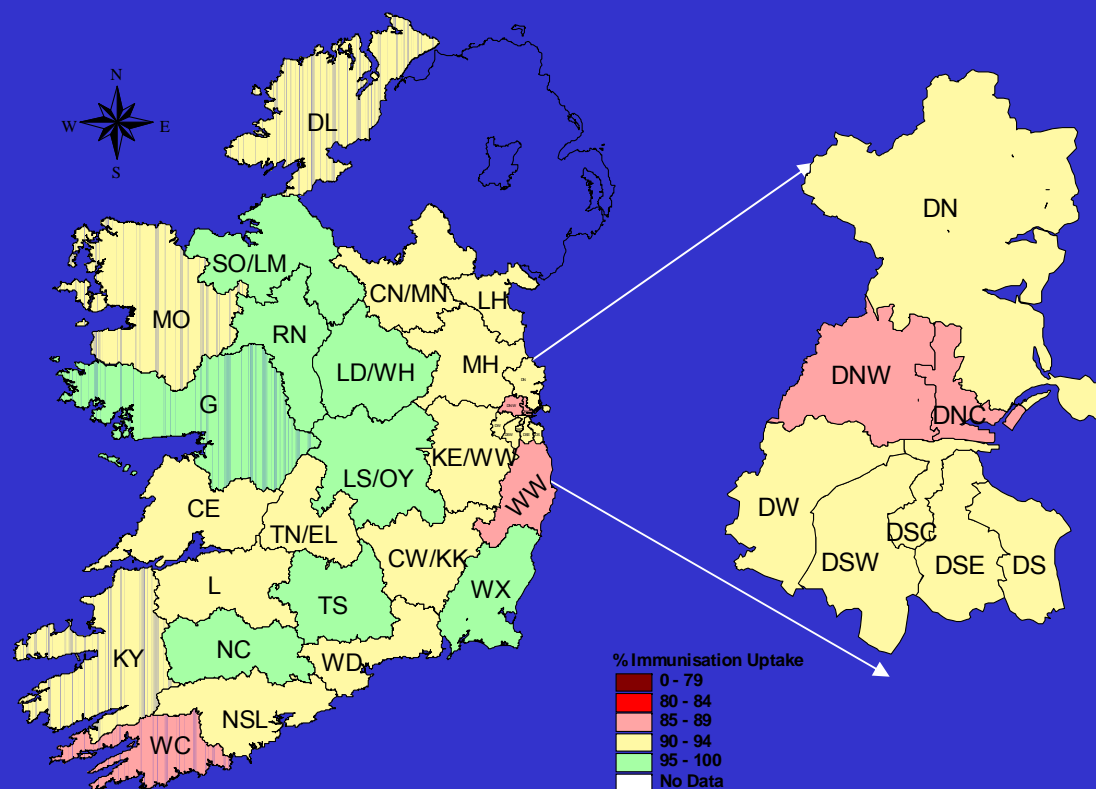


Source: HPSC

Quarter 1 2015 D3 immunisation uptake rates (%) by LHO, in those 24 months of age in Ireland and Dublin (source HPSC)



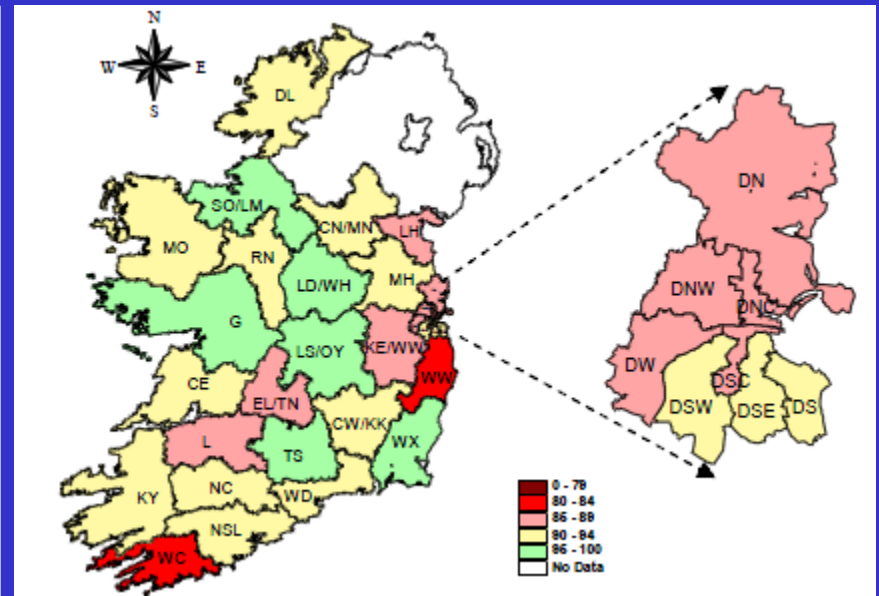
Quarter 1 2015 MMR immunisation uptake rates (%) by LHO, in those 24 months of age in Ireland and Dublin (source HPSC)



Decline in vaccine uptakes

Hib_b booster dose by LHO in those reaching 24 months Q1 2015

	Q1 2010	Q3 2010	Q1 2015
Men C ₃	93%	80%	87%
PCV ₃	-	88%	92%
Hib _b (booster dose)	89%	84%	91%



Source: HPSC



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Decline in vaccine uptakes

Actions

- Highlight 5 visits at every opportunity
- Give an appointment for next visit
- Send a text reminder before appointment
- Follow up defaulters as soon as possible
- Send vaccine returns on time
- Defaulters need appropriate vaccines even if they are over the recommended age

Immunisation Schedule

for children born on or after 1st July 2015

AGE	WHERE	VACCINATION
At birth	HSE clinic or maternity hospital	BCG 1 INJECTION
2 months	GP surgery Visit 1	6 in 1 + PCV 2 INJECTIONS
4 months	GP surgery Visit 2	6 in 1 + MenC 2 INJECTIONS
6 months	GP surgery Visit 3	6 in 1 + PCV 2 INJECTIONS
12 months	GP surgery Visit 4	MMR + PCV 2 INJECTIONS
13 months	GP surgery Visit 5	MenC + Hib 2 INJECTIONS

Have you made an appointment for your child's next visit?

REMEMBER
Your child needs 5 GP visits.
Bring your child's immunisation passport to each visit.
www.immunisation.ie

What common reactions can my child get after being vaccinated and what should I do?

Common reactions	What to do
Soreness, swelling and redness in the area where the injection was given	Give paracetamol or ibuprofen to relieve aches and pains. Make sure clothes are not too tight or rubbing against the area where the injection was given.
Fever (over 39.5°C)	Do not overdress your baby. Make sure their room isn't too hot. Give extra fluids to drink. Give paracetamol or ibuprofen to lower the fever.
Headache or irritability	Give paracetamol or ibuprofen to relieve aches and pains.

→ The dose of paracetamol or ibuprofen recommended for your child is written on the bottle according to the child's age.
 → Please ask your pharmacist for a sugarfree mixture of paracetamol or ibuprofen suitable for your child's age.
 → Using paracetamol or ibuprofen over a long period without advice from a doctor may be harmful.
 If your child received the MMR vaccine today they may get a rash 6-10 days later (mini measles). This is not contagious.

Remember, if your child is very unwell after getting a vaccine, they may be sick for some other reason. If you are worried about your child, please contact your GP, practice nurse or public health nurse for further advice.

REMEMBER to bring your child's vaccine passport to each GP visit so that your child's vaccines are recorded and you have this information when they are older.

For further information

www.immunisation.ie

Remember, it takes 5 GP visits to fully vaccinate your baby.

2 months 4 months 6 months 12 months 13 months

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NIAC recommendations

	Recommendation	Implementation
MenC* (Aug 2014)	Schedule change from 4, 6 and 13 months to 4,13 months	July 1 st 2015
	Introduction of adolescent dose at 12- 13 years	2014/2015
Rotavirus (2013)	Oral vaccine recommended 2 -3 doses at 2, 4 and 6 months	?? 2016
MenB (Jan 2015)	Introduction to PCI schedule	?? 2016

* MenC

- Evidence 1 dose is sufficient in infants
- Same schedule introduced in the UK in 2013

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Primary Childhood Immunisation (PCI) Schedule

	CURRENT SCHEDULE		NEW SCHEDULE	
Date of birth	Babies born up to 30 th June 2015		Babies born on or after 1st July 2015	
Age	Immunisations	Comment	Immunisations	Comment
2 months	6 in 1 + PCV	2 injections	6 in 1 + PCV	2 injections
4 months	6 in 1 + MenC	2 injections	6 in 1 + MenC	2 injections
6 months	6 in 1 + PCV + MenC	3 injections	6 in 1 + PCV	2 injections
12 months	MMR + PCV	2 injections	MMR + PCV	2 injections
13 months	MenC + Hib	2 injections	MenC + Hib	2 injections

6 in 1 Diphtheria, Tetanus, Pertussis, Polio, Hepatitis B, Haemophilus influenzae B

PCV Pneumococcal conjugate vaccine

MenC Meningococcal C vaccine

MMR Measles, Mumps Rubella

Hib Haemophilus influenzae B

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Primary school immunisation schedule 2015/2016

Age (years)	Vaccine
4 -5	4 in 1 MMR

4 in1

Diphtheria
Tetanus
Pertussis
Polio

MMR

Measles, mumps and rubella




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4 in 1 adverse events

- More reactogenic
 - hot, swollen, red and tender arms from the shoulder to elbow
 - large, localised swelling (diameter > 50 mm) occurring around the injection site
- Begin within 48 hours of vaccination
- Resolve spontaneously
- Antibiotic treatment or anti-inflammatory not indicated
- Not usually associated with significant pain or limitation of movement
- Inform parents in advance

4 in 1 and MMR Booster School Vaccination Programme for Children in Junior Infants

Name: _____
Date: _____
Time of vaccination: _____



Your child was given the following vaccines today

4 in 1 ☐ **MMR** ☐

Common reactions expected after these vaccines may include

- mild fever
- soreness, swelling and redness where the injection was given. Sometimes this swelling can be from the shoulder to the elbow. This usually occurs within 2 days of the vaccination and gets better over 4 – 5 days. Antibiotics are not needed to treat this local reaction.

After MMR vaccine


- some children may get "mini measles" with a rash and fever 6 to 10 days after the injection
- on rare occasions, children may get "mini-mumps" with swelling in the jaw in the third week after vaccination

These are not contagious.

You can give your child paracetamol or ibuprofen to relieve aches and pains or to lower the fever.

If you are concerned about your child the school vaccination team can be contacted during office hours from Monday to Friday at

If you require medical advice after these hours please contact your family doctor.

 For more information see www.immunisation.ie

09/14

Primary school immunisation uptake (Target 95%)

	4 in 1	MMR
Galway	95.7%	94.7%
Mayo	87.8%	89.3%
Roscommon	94.3%	93.4%
Donegal	92.1%	92.0%
Ireland	91.5%	91.3%



Second level school immunisation schedule 2015/2016

Age (years)	Vaccine
12-13	Tdap MenC*
12 – 13 (girls only)	HPV (2 dose schedule)

Tdap Tetanus, low dose diphtheria & pertussis
MenC Meningococcal C vaccine
HPV Human papillomavirus



Second level school vaccination programme

Name: _____

Date: _____

Time of vaccination: _____

Your child was given the following vaccines today

☐ HPV ☐ Tdap ☐ MenC

Common reactions expected after these vaccines may include

- soreness, swelling and redness where the injection was given (this usually passes after a day or two)
- dizziness
- headache

Occasionally your child may feel sick or have a mild fever. On rare occasions some children may have an itchy rash or hives.

You can give your child paracetamol or ibuprofen to relieve aches and pains or to lower the fever. If you are concerned about your child please seek medical advice.

The school vaccination team can be contacted during office hours from Monday to Friday at

If you require medical advice after these hours please contact your family doctor.

Before the next vaccine, you should write to the vaccination team if there has been

- a serious reaction to these vaccines
- any change to your child's medical history or your consent

You will get a record of your child's vaccinations when they have all been completed. **Please keep this safe.**

For more information see www.immunisation.ie



www.immunisation.ie

Adolescent MenC booster vaccine

- Peak rates in under 5 years and 15-19 years
- Concerns about waning immunity in adolescents
- Recent study
 - those vaccinated at <1 year, vaccine effectiveness decreased by 50% after 10 years
 - those vaccinated with one dose at 12–19 years showed no changes
 - vaccination at ≥ 12 years related to a low number of vaccine failures and a higher and longer protection over time
- MenACWY in UK since 2015/2016



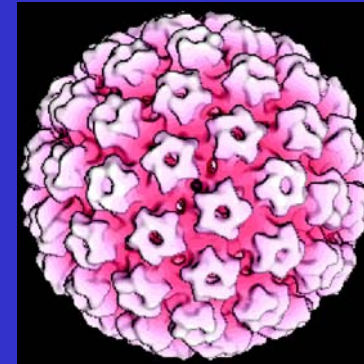
Second level school immunisation uptake (Target 95%)

	Tdap
Galway	82.1%
Mayo	82.6%
Roscommon	N/A
Donegal	90.9%
Ireland	83.7%

HPV vaccination programme

Gardasil (Sanofi Pasteur)

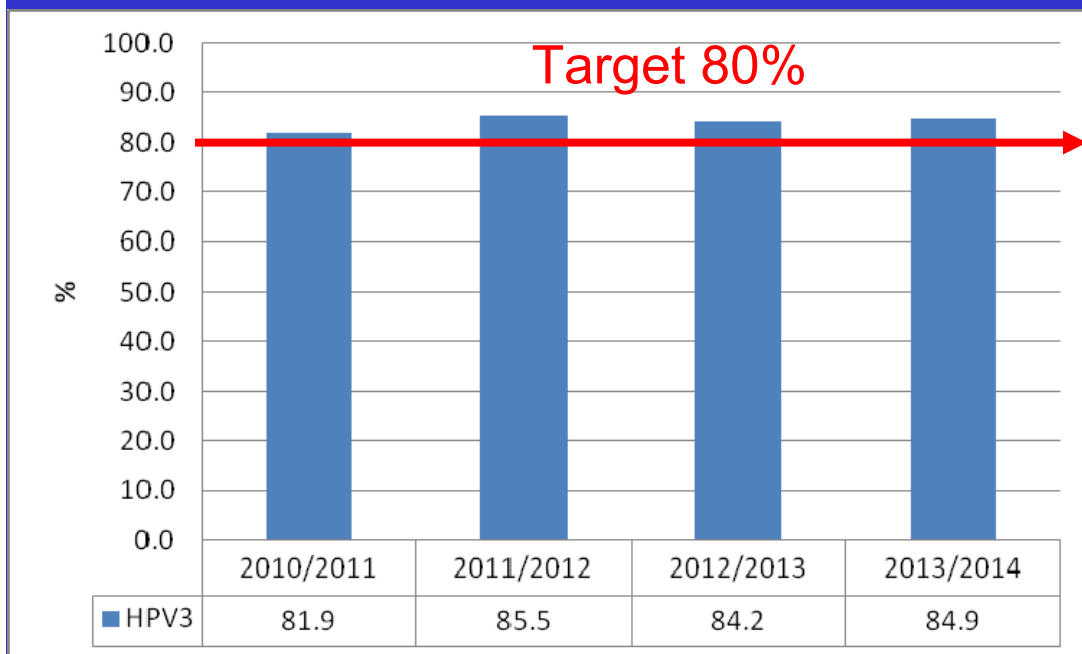
- protects against
 - HPV 16 and 18
(causes 70% cervical cancers)
- and
 - HPV 6 and 11
(causes 90% anogenital warts)



Computerised image of
the human papillomavirus
Courtesy of Dept of
Pathology, University of
Cambridge

HPV vaccine uptake 2010/2011 - 2013/2014

Routine programme First years



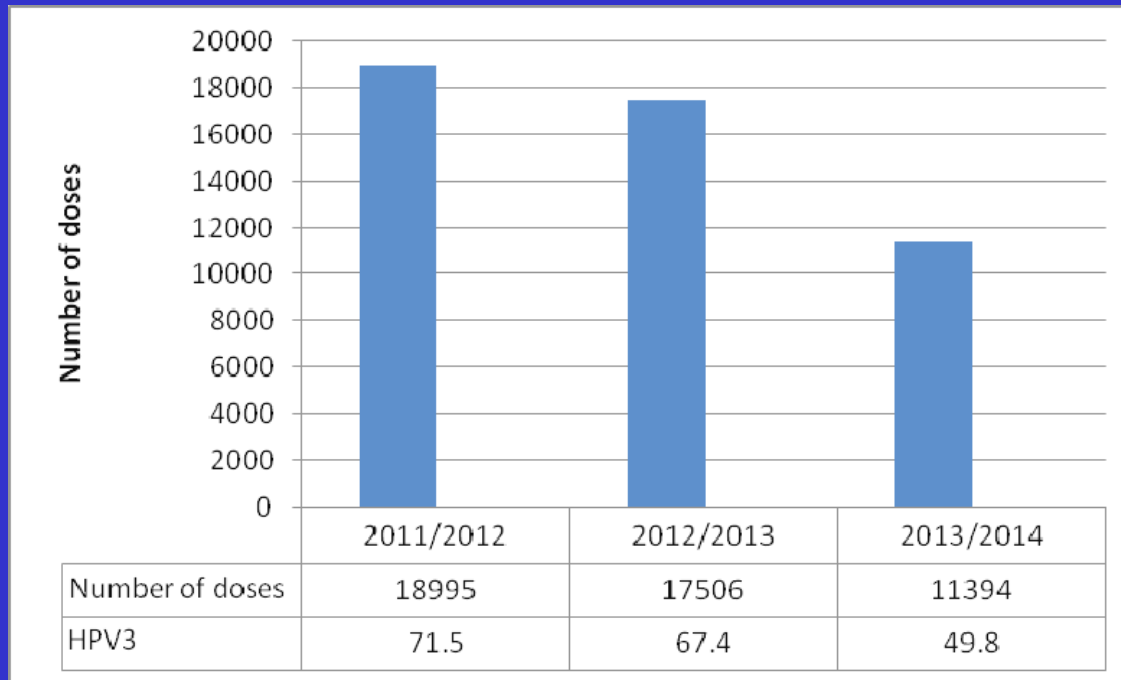
Galway	86.8%
Mayo	80.7%
Roscommon	87.9%
Donegal	87.8%

Over 80% (84.4%) uptake achieved for 3 dose schedule
 Excellent cohort retention
 >95% girls who started dose 1 completed dose 3



HPV vaccine uptake 2011/12 - 2013/14

Catch up programme Sixth years



Galway	83.6%
Mayo	54.9%
Roscommon	43.0%
Donegal	43.6%

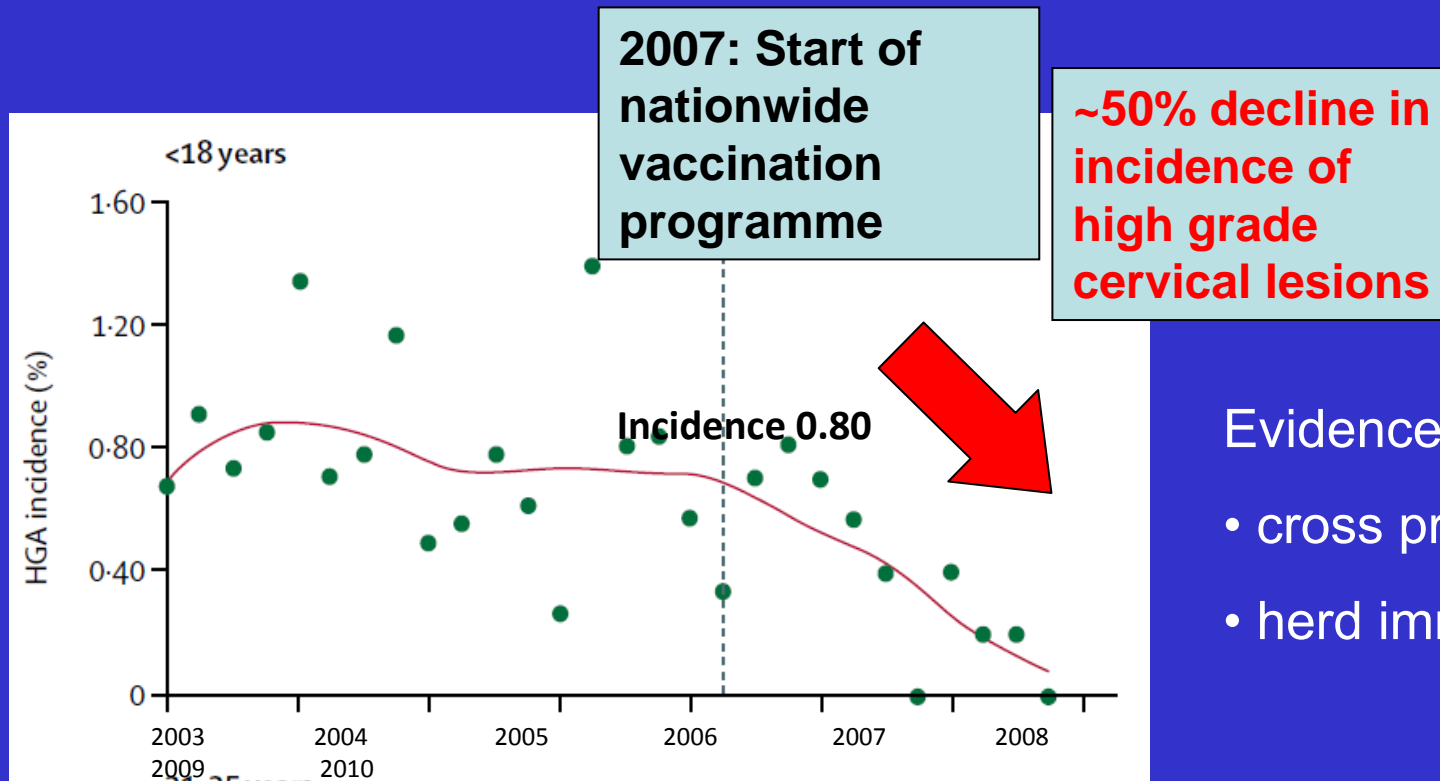
- Excellent cohort retention
- >93% girls who started dose 1 completed dose 3



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Vaccine Impact in Australia

High Grade Cervical Lesions <18 years



Evidence of

- cross protection
- herd immunity



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Gardasil vaccine safety

- 178 million doses distributed globally
- WHO, EMA, CDC review safety data – no serious adverse events
- EMA review July 2015
 - 2 rare conditions
 - complex regional pain syndrome (CRPS)
 - postural orthostatic tachycardia syndrome (POTS)
 - causal link not established
 - both can occur in non-vaccinated individuals
 - does not question the benefits of HPV vaccines
 - no change in recommendations for the use of the vaccine



Seasonal influenza vaccination programme

EVERY YEAR FLU CAUSES SEVERE ILLNESS AND DEATH.

IF YOU ARE:

- 65+**
Over 65
- +**
Have a long-term illness
- Pregnant**
- A health care worker**

GET YOUR FLU VACCINE NOW.

IT'S A LIFESAVER



For more information, talk to your GP or Pharmacist

 **Feidhmeannacht na Seirbhíse Sláinte**
Health Service Executive



I'M VACCINATING FOR TWO NOW.

Pregnant women and their babies are at risk from flu.
Protect you and your baby -
get your flu vaccine.

IT'S A LIFESAVER



For more information, talk to your GP or Pharmacist.

 **Feidhmeannacht na Seirbhíse Sláinte**
Health Service Executive



2015/2016 Annual campaign NEW

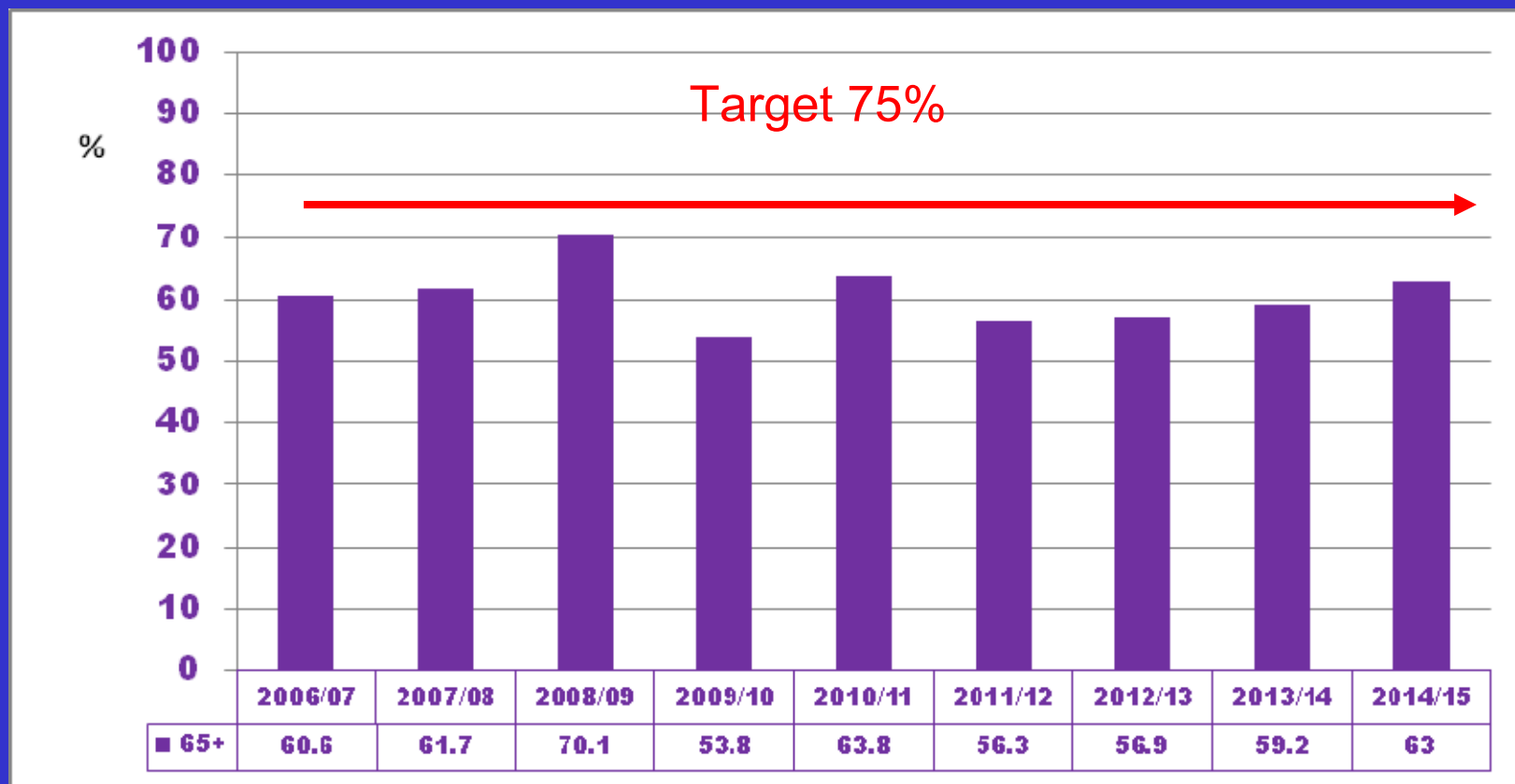
- Chronic obstructive pulmonary disease
- Acute coronary syndrome
 - previous history of MI
 - unstable angina
- Pregnant women
- Health care workers
- Season continues until end of April



Seasonal influenza vaccination programme

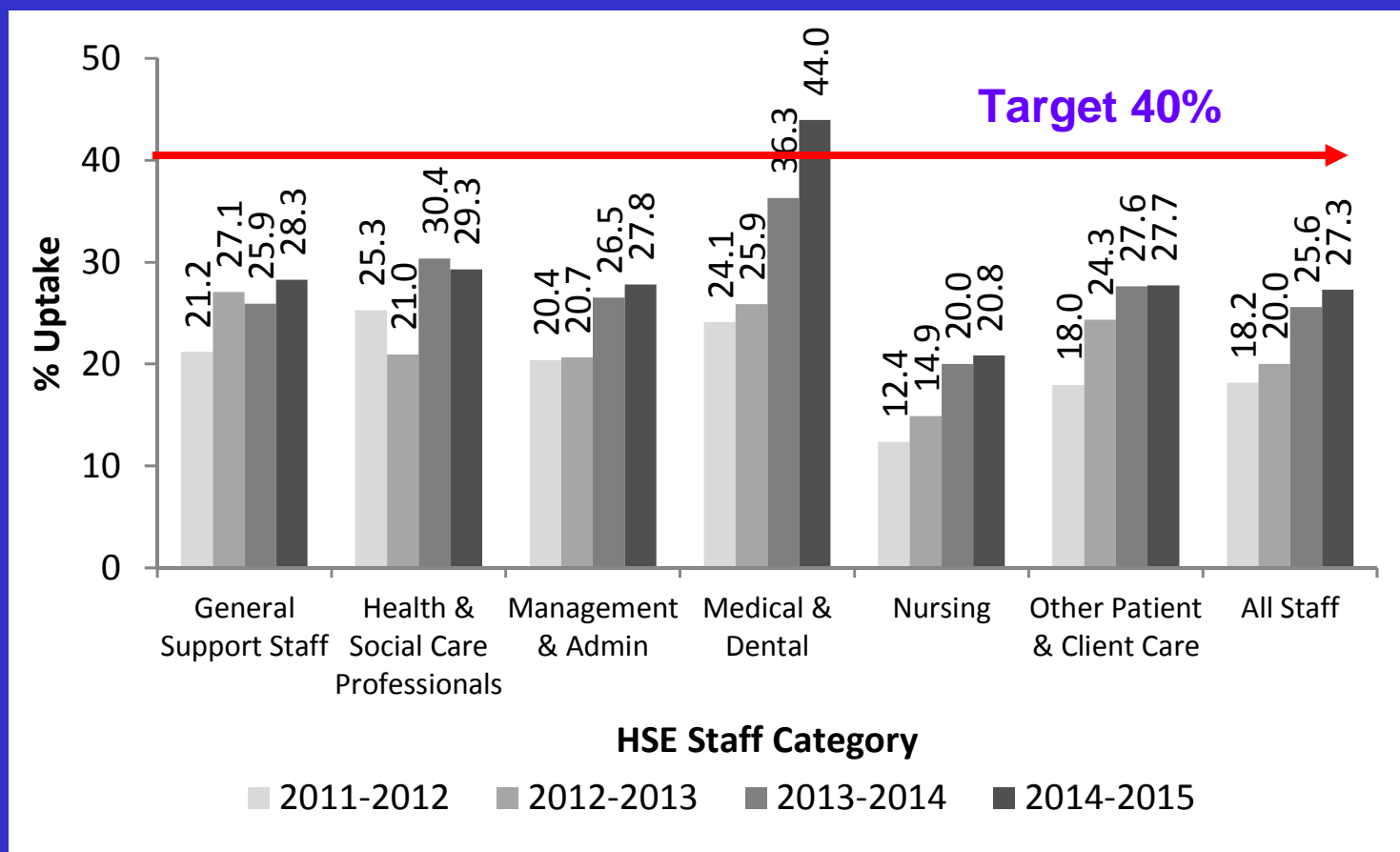
Vaccine uptake for 65+ years with GMS or doctor only card

Source:HPSC



Seasonal influenza vaccination programme

% vaccine uptake in health care workers



<http://www.hpsc.ie/hpsc/A-Z/Respiratory/Influenza/SeasonalInfluenza/InfluenzaandHealthcareWorkers/>



Why should health care workers be vaccinated?

“I’m very healthy so my immune system will protect me from flu.”

“I know the symptoms and would stay at home if I got sick so I wouldn’t infect my colleagues or patients.”

“I got the vaccine and it gave me the flu.”

- >20% HCWs get flu every year
- may only have mild symptoms and continue to work
- highly transmissible 1 day before & 5-7 days after symptoms
- healthy people can get seriously ill from flu
- vaccine contains killed viruses so cannot cause flu

<http://www.immunisation.ie/en/HealthcareProfessionals/Influenza>



Pneumococcal polysaccharide vaccine (PPV23)

Recommended for

- Those aged 65 and older
- Those aged 2- <65 years in specific at risk groups
 - Asplenia or hyposplenism (splenectomy, sickle cell disease, haemoglobinopathies, coeliac syndrome)
 - Children < 5 years with a history of IPD
 - Chronic heart, respiratory, liver, renal disease or nephrotic syndrome
 - CSF leaks congenital or complicating skull fracture or neurosurgery
 - Diabetes mellitus
 - HIV infection
 - Immunosuppression due to disease or treatment
 - Individuals who have received, or are about to receive, cochlear implants
 - Post haematopoietic stem cell transplant, solid organ transplant



Pneumococcal polysaccharide vaccine (PPV23)

Revaccination

Aged 65 years and older

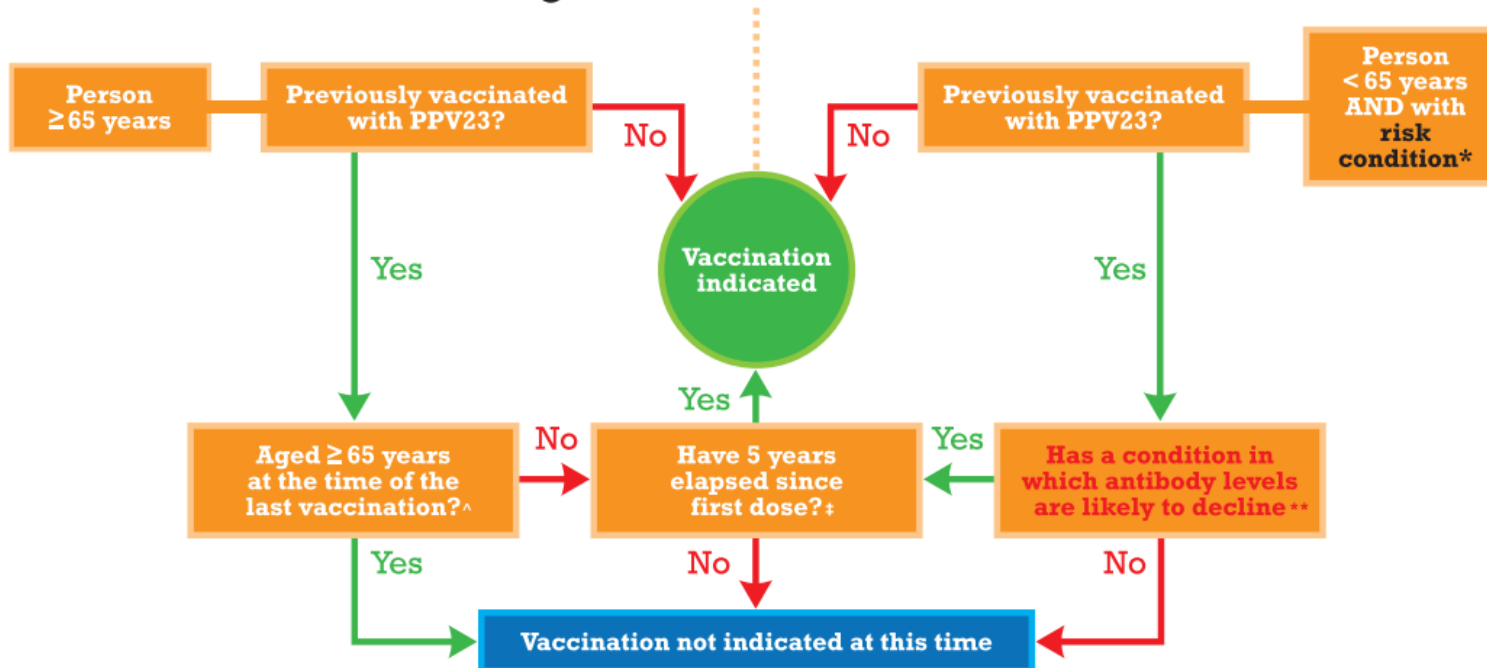
- Had one dose of PPV23
 - **no further dose regardless of immune status**
- Had PPV23 more than 5 years before and less than 65 years of age
 - give a once only booster vaccination 5 years later

Less than 65 years of age

- if antibody levels are likely to decline rapidly
 - asplenia & hyposplenism
 - immunosuppression
 - chronic renal disease or renal transplant
- booster vaccination 5 years after the first vaccination
- one further PPV booster at or after 65 years of age - 5 years after 2nd dose.



Pneumococcal Polysaccharide Vaccine (PPV23) Algorithm for Vaccination



* Asplenia or splenic dysfunction (splenectomy, sickle cell disease, coeliac syndrome); chronic renal, heart, lung, liver disease, diabetes mellitus, complement deficiency, immunosuppressive conditions; CSF leak, cochlear implant recipients or candidates for implants; children < 5 years with history of invasive disease.

^ Revaccination not indicated for any person who has received a dose of PPV23 at age ≥ 65 years.

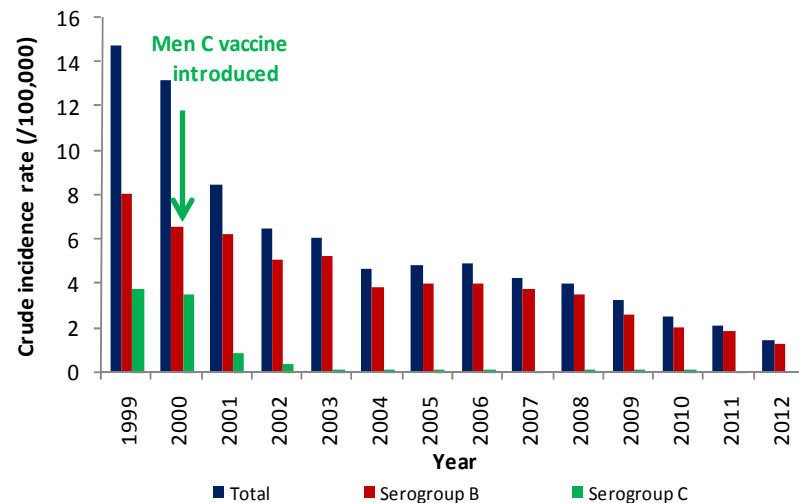
‡ If vaccination has been given during chemotherapy or radiotherapy revaccination 3 months after treatment is indicated.

** Those with no spleen, with splenic dysfunction, immunosuppression including HIV infection, nephrotic syndrome, renal transplant or chronic renal disease.

New vaccines

TD calls for
brain bug
vaccine deal

- Meningococcal Group B
 - licensed
 - recommended for contacts and at risk groups
 - NIAC recommendation for universal vaccination ?? date for implementation



Call for meningitis vaccine

By Kevin Keane

HEALTH campaigners have called on the Department of Health to follow the lead of authorities in Britain and the North by making a new vaccine

mentation was for the introduction of the vaccine if a cost-effective agreement can be reached with the manufacturer.

Dependent on deal with drug's maker



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New vaccines

- Meningococcal Group B
 - can be given to healthy children
 - dosage schedule and further details in Immunisation Guidelines
<http://www.hse.ie/eng/health/immunisation/hcpinfo/guidelines/chapter13.pdf>
 - can be given at same time as DTaP, IPV, Hib, HepB, PCV, MenACWY, MMR and varicella.
 - give in different limb
 - consider prophylactic paracetamol at the time or shortly after vaccine for children under 2 years

Vaccine supply and more details from Allphar 01 4688456



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New vaccines

2 New Ebola Vaccines Pass Important Early Test, Researchers Say

By DENISE GRADY **APRIL 8, 2015**

Email

Two new Ebola vaccines have passed an important test, protecting monkeys against the strain of the virus responsible for the current deadly outbreak, researchers reported on Wednesday. Only one dose was needed



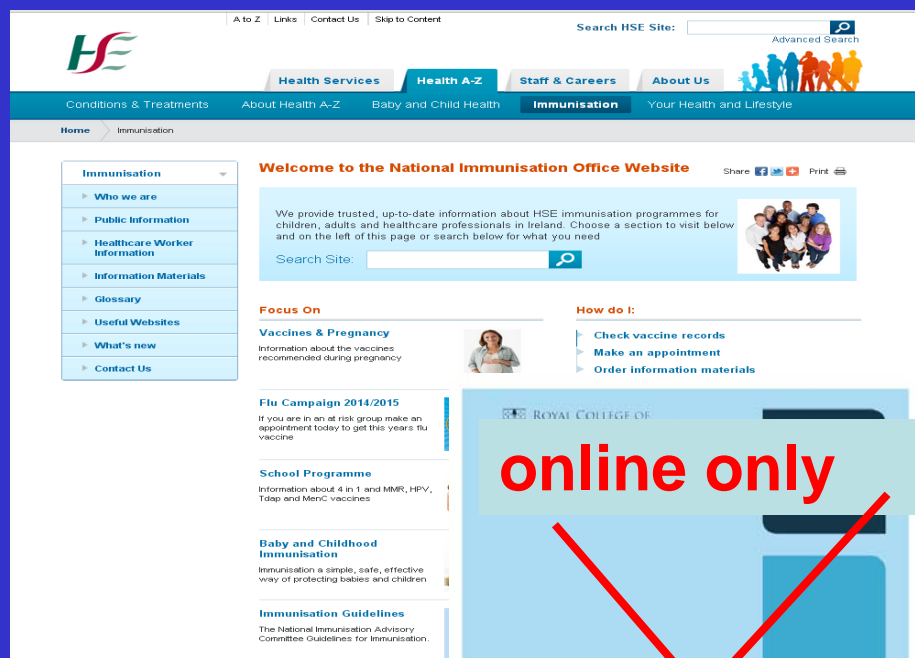
- ~ 30 new or improved vaccines anticipated in next 10 years



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HE
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Health Service Executive

More information



<http://www.immunisation.ie/en/HealthcareProfessionals/ImmunisationGuidelines/>

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Why Immunise?

- Immunisation has saved more lives than any other public health intervention apart from the provision of clean water
- Immunisation is one of the most cost effective and safest of all health interventions



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